

10006496-120501

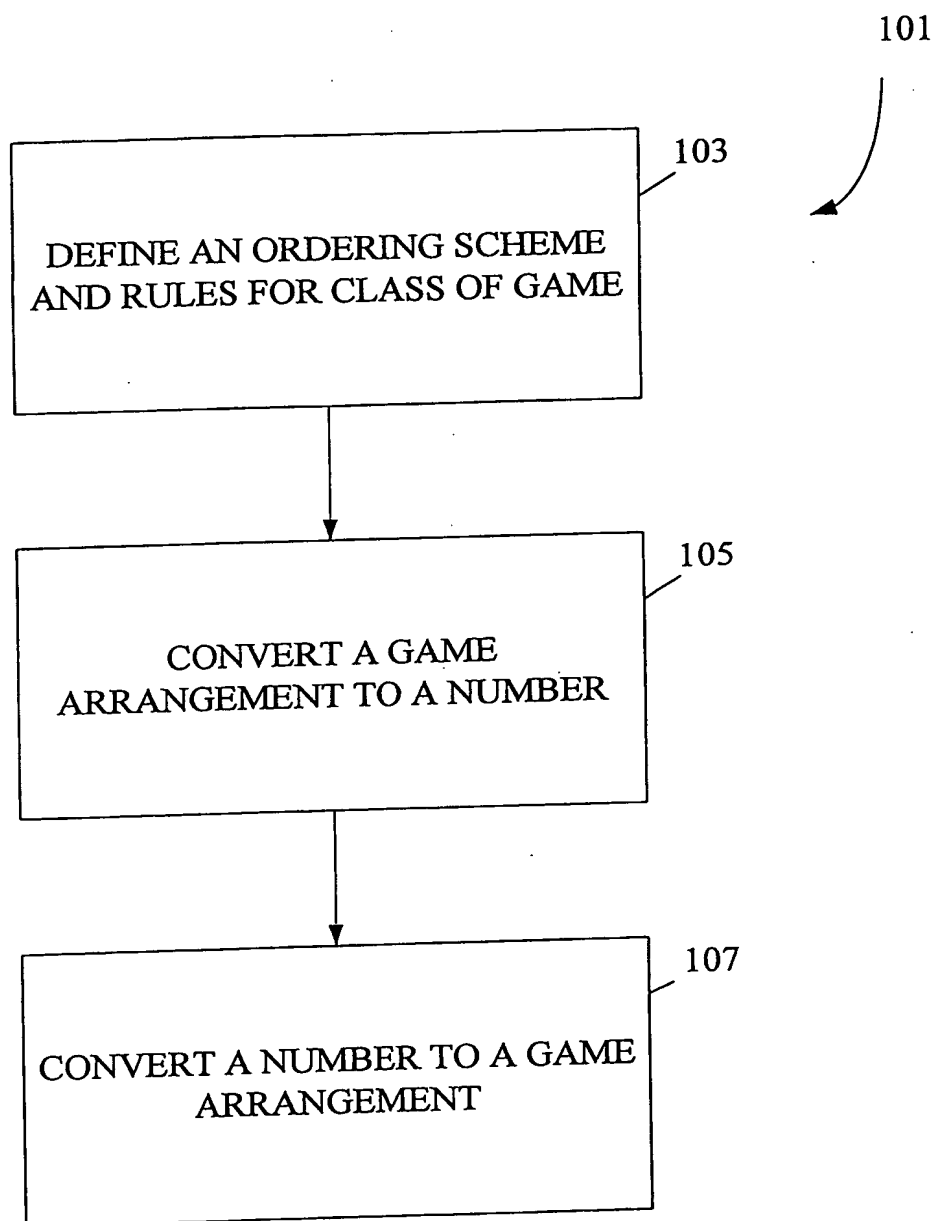


Figure 1

10006496 . 120501

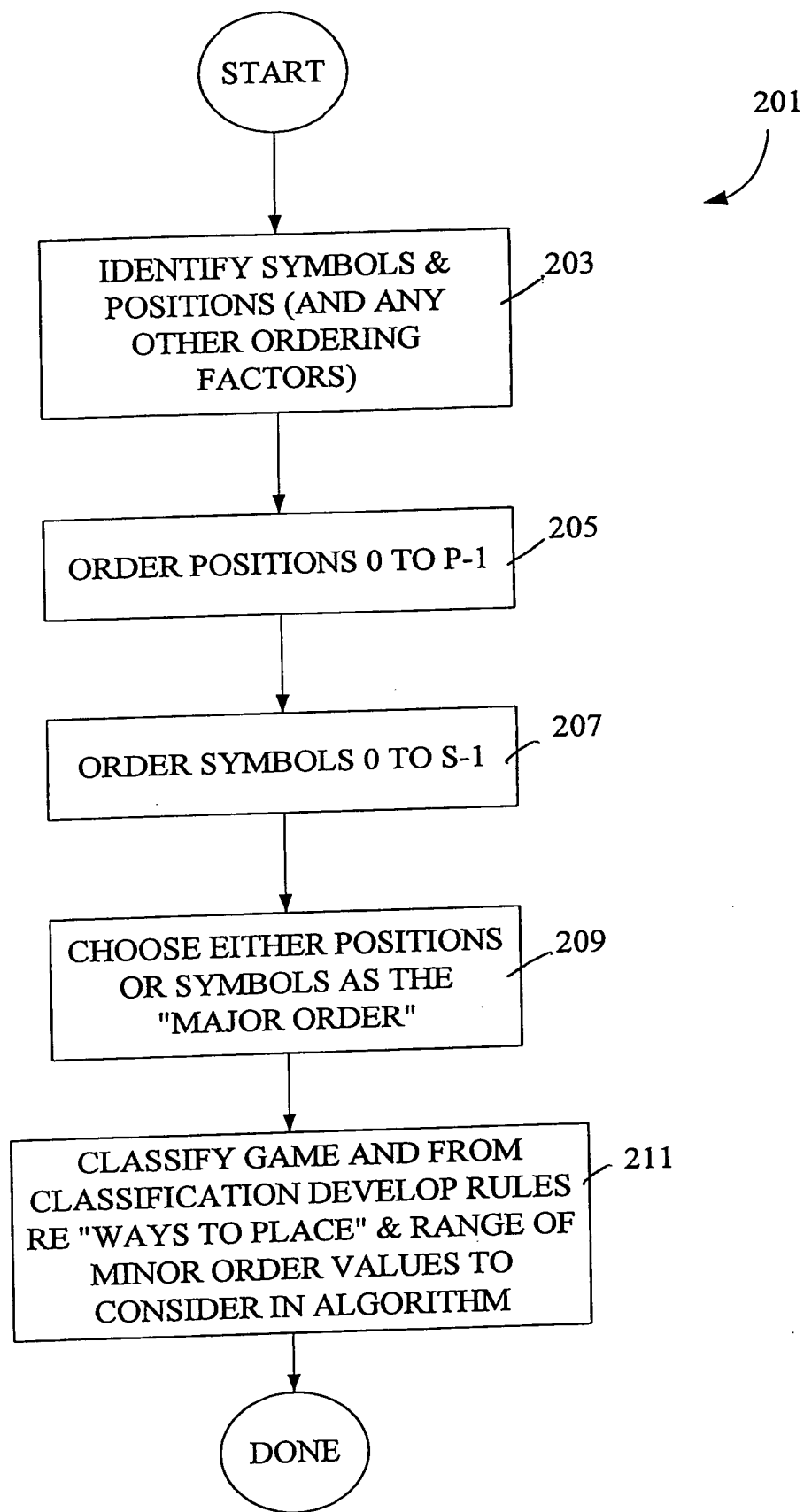


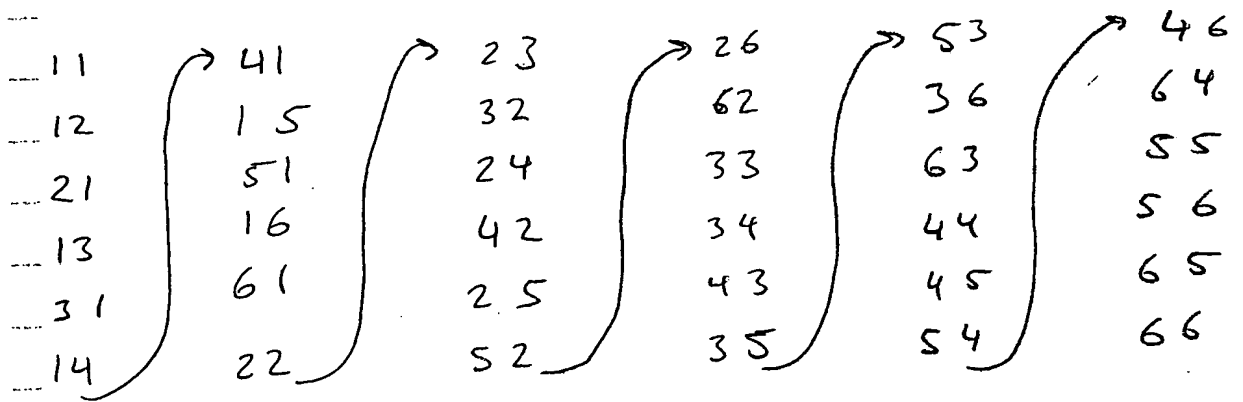
Figure 2

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2h	3h	4h	5h	6h
2h	3h	4h	5h	7h
2h	3h	4h	5h	8h
		.		
		.		
		.		
2h	3h	4h	5h	Ah
2h	3h	4h	6h	7h
2h	3h	4h	6h	8h
		.		
		.		
		.		
3h	4h	5h	6h	7h
3h	4h	5h	6h	8h
		.		
		.		
		.		
9s	10s	Js	Qs	Ks
9s	10s	Js	Qs	As
		.		
		.		
		.		
10s	Js	Qs	Ks	As

Figure 3

Symbols as Major Order (Two Dice)



Position as Major Order (Two Dice)

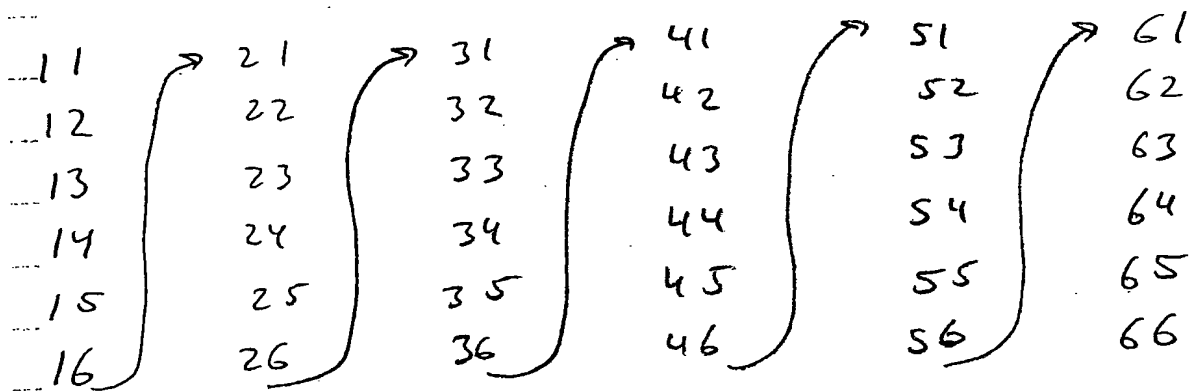


Figure 4

poker hand
under consideration

3H KH 2D 7C S

number
skipped over
at position $P=0$

2H	3H	4H	5H	6H
2H	3H	4H	5H	7H
⋮				
2H	10S	JS	QS	KS
2H	JS	QS	KS	AS
3H	4H	5H	6H	7H
3H	4H	5H	6H	8H
⋮				
3H	4H	JS	QS	KS
3H	4H	QS	KS	AS
3H	5H	6H	7H	8H
3H	5H	6H	7H	9H

ways to place
3H 4H...

number skipped
over at
position $P=1$

3H	QH	JS	QS	KS
3H	QH	QS	KS	AS
3H	KH	AH	2D	3D
3H	KH	AH	2D	4D

10S JS QS KS AS

Figure 5

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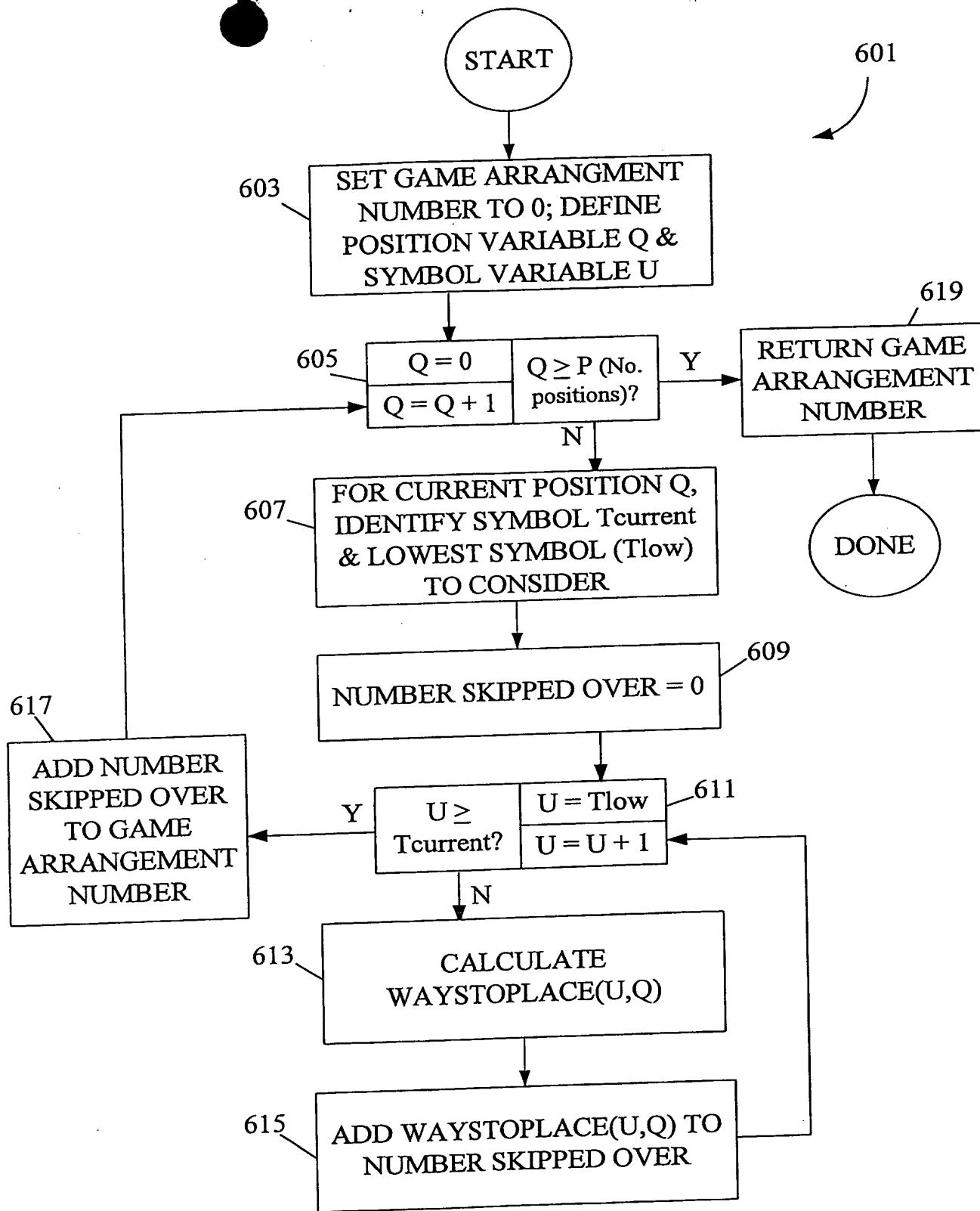


Figure 6

Convert KH, 7C, 4S, 8D, 3H to a number

order the cards! \rightarrow 3H, KH, 8D, 7C, 4S

Start w/ # = 0

Position Q = 0

Symbol T = 1 (3H) 3H ---

V = 0 (2H)

compute # of ways to have 2H --- (draw $\binom{52-0-1}{5-0-1}$)
= 249,960

= 0 + 249,960 = 249,960

Position Q = 1, Symbol T = 1 (KH) $\xrightarrow{\text{draw} = 4H}$ 3H KH ---

V = 2 (4H)

compute # of ways to place 3H 4H ---
= 18,424

= 249,960 + 18,424 = 268,384

V = 3 (5H)

compute ways to place (3H 5H ---) = 17,296

= 268,384 + 17,296 = 285,680

V = 4 (6H)

compute ways to place (3H 6H ---) = 16,215

= # + 16,215 = 301,895

V = 5 (7H)

compute ways to place (3H 7H ---) = 15,180

= # + 15,180 = 317,075

V = 6 (8H)

compute ways to place (3H 8H ---) = 14,190

= # + 14,190 = 331,265

V = 7 (9H)

compute ways to place (3H 9H ---) = 13,244

= # + 13,244 = 344,509

V = 8 (10H)

compute ways to place (3H 10H ---) = 12,341

= # + 12,341 = 356,850

Figure 7 over \rightarrow

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$$U = 9 \text{ (JH)}$$

$$\text{compute ways to place (3H 5H ---)} = 11,480$$

$$\# = \# + 11,480 = 368,220$$

$$U = 10 \text{ (QH)}$$

$$\text{compute ways to place (3H QH ---)} = 10,660$$

$$\# = \# + 10,660 = 378,930$$

U = 11 (KH) This is over symbol T, being considered. Stop the B.Z. card & go to the next position.

$$\text{Position } Q = 2, \text{ Symbol } T = 19 \text{ (80)}$$

by placing this card

skipped over by 3H [✓] (over 3H) -

$$= \text{ways to place (2H ---)}$$

placing this card

skipped over by 3H KH ---

$$= \text{ways to place (3H 4H ---)}$$

$$+ \text{ ways to place (3H 5H ---)}$$

$$+ \text{ (3H 6H ---)}$$

$$+ \text{ (3H 7H ---)}$$

$$+ \text{ (3H 8H ---)}$$

$$+ \text{ (3H 9H ---)}$$

$$+ \text{ (3H 10H ---)}$$

$$+ \text{ (3H QH ---)}$$

skipped over by (2H KH 8D -)

$$= \text{ways to place (3H KH AH ---)}$$

$$+ \text{ " 3H KH 2D}$$

$$+ \text{ " 2H KH 2D}$$

$$+ \text{ " 2H KH 4D}$$

$$+ \text{ " 7D}$$

Figure 7
(continued)

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	Position Dependent	Position Independent
with Replacement	$\exp(x, y)$ $0 \leq u < T_{curr}$ $T_{low} = 0$	$C(x, y)$ $T_{prev} \leq u < T_{curr}$ $T_{low} = T_{prev}$
without Replacement	$P(x, y)$ $0 \leq u < T_{curr}$ (excluding previously used values) $T_{low} = 0$	$C(x, y)$ $T_{prev} < u < T_{curr}$ $T_{low} = T_{prev} + 1$

Figure 8

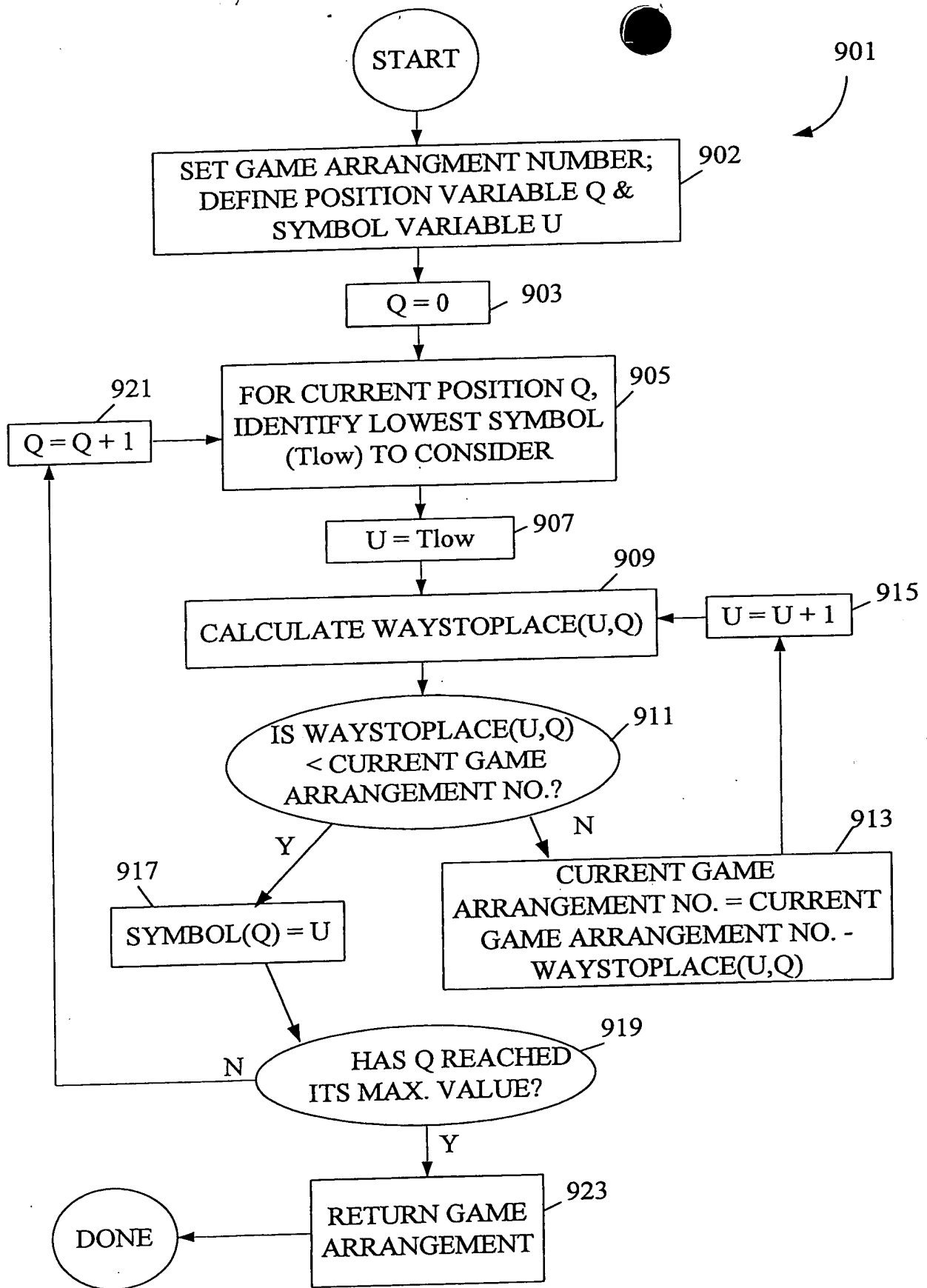


Figure 9

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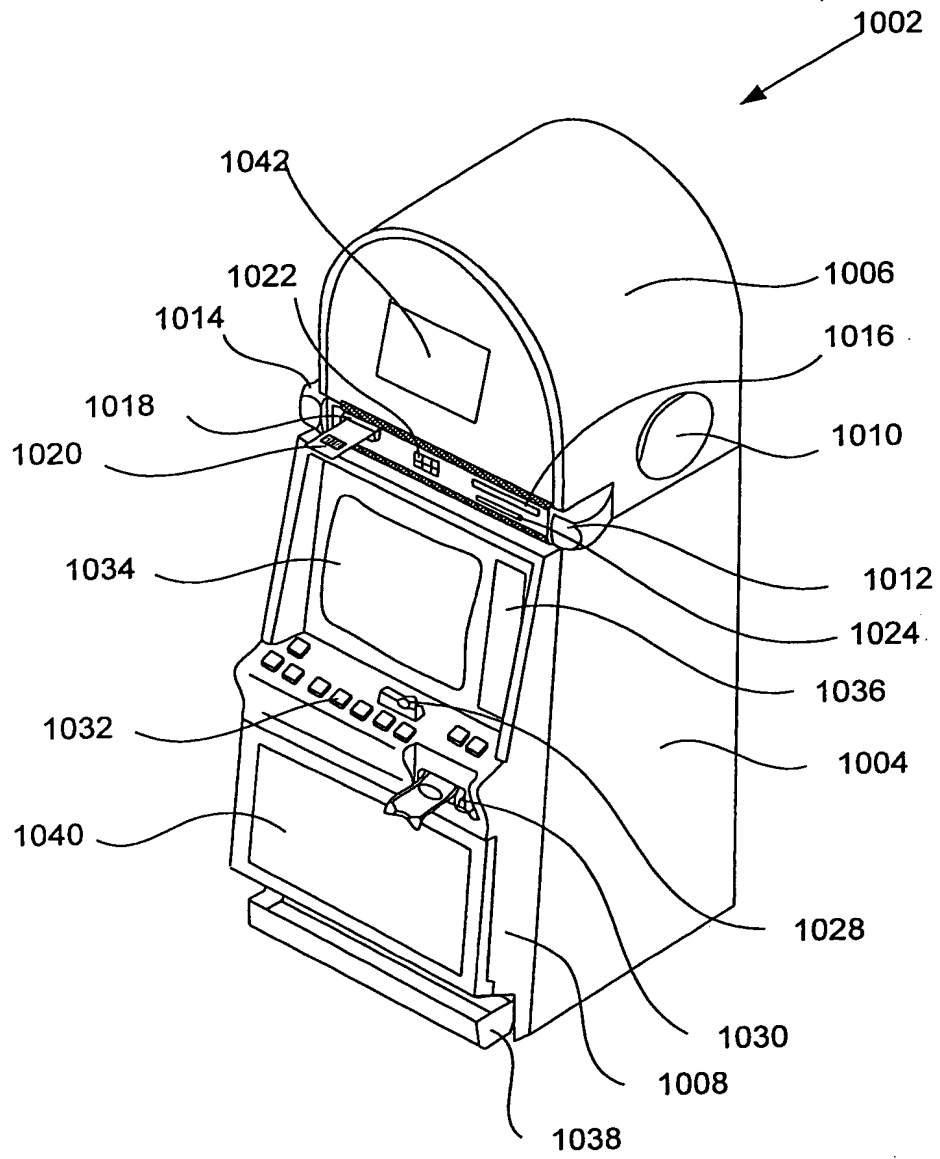
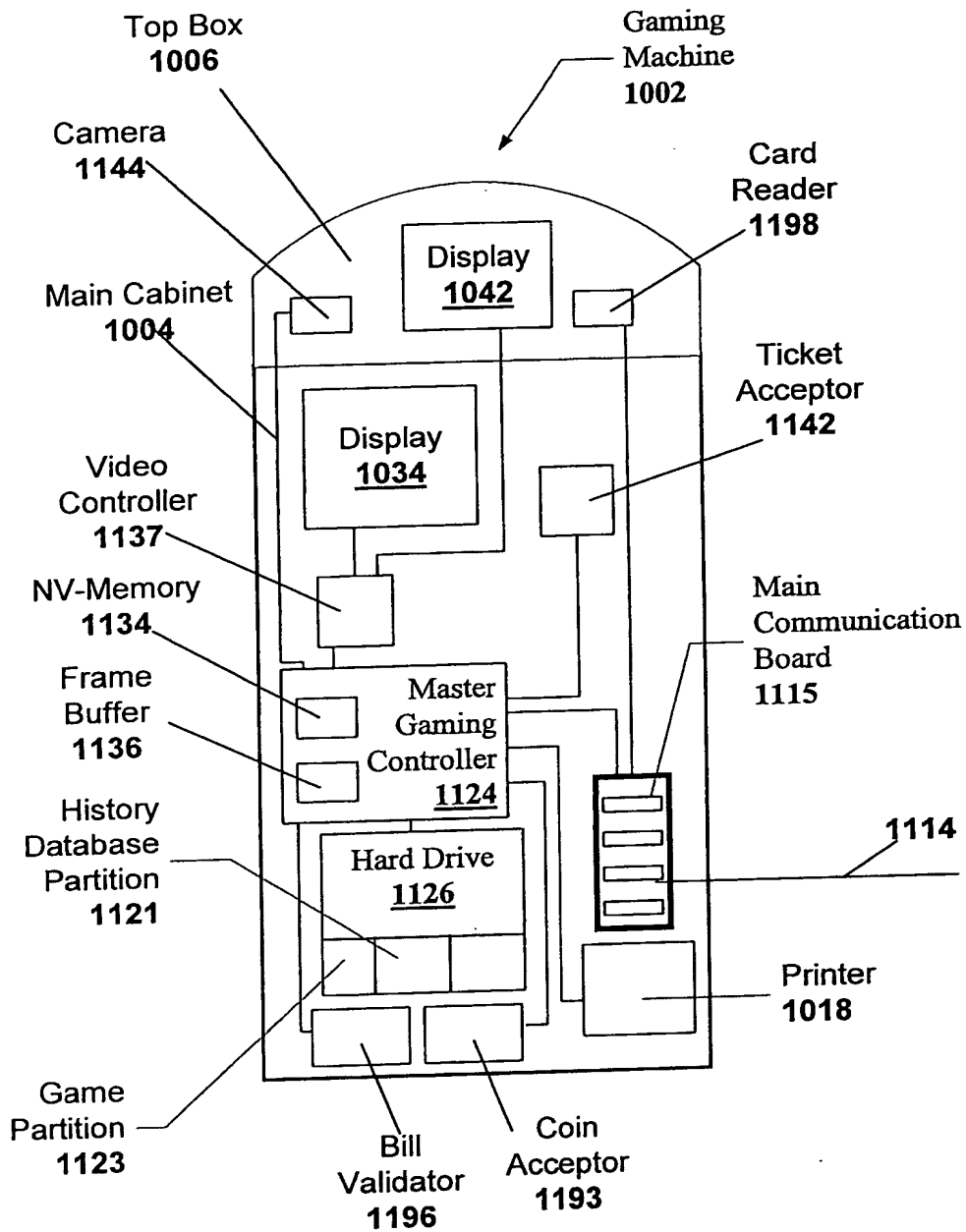


Figure 10

Figure 11



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